

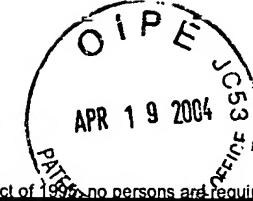
Customer No. 28880

Confirmation No.

PTO/SB/21 (03-03)

Approved for use through 04/30/2003. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL  
FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/662,046
Filing Date	September 11, 2003
First Named Inventor	Bolton, et al.
Art Unit	1626
Examiner Name	Not Yet Assigned
Attorney Docket Number	PC 25006A

Total Number of Pages in This Submission

## ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to a Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	Statement as Provided by 37 CFR 1.97(b)
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	Return Postcard
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

## Remarks

AUTHORIZATION TO CHARGE THE FEE AND ANY ADDITIONAL FEES AS NECESSARY OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT 23-0455 IS HEREBY GIVEN.

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Cynthia M. Bott
Signature	
Date	4-13-04

## CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O.Box 1450, Alexandria, VA 22313-1450 on this date 4/13/04

Typed or printed	Cynthia D. Bernges
Signature	

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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USPTO Fax No. 703-872-9306



PC 25006A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/662,046  
Applicant : Bolton, et al.  
Filed : September 11, 2003  
Title : "INHIBITORS OF FACTOR Xa AND OTHER SERINE PROTEASES INVOLVED IN THE COAGULATION CASCADE"  
TC/AU : 1626  
Examiner : Not Yet Assigned  
Docket No. : PC25006A  
Customer No. : 28880

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT (37 C.F.R. §1.97(b))

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form 1449 are brought to the attention of the Examiner.

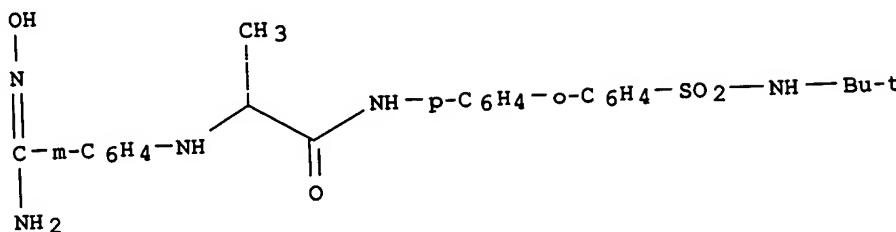
The Information Disclosure Statement submitted herewith is being filed before the mailing of the first Office Action on the merits.

In accordance with 37 C.F.R. §1.98(a)(2), a copy of each document or other information listed on the enclosed Form 1449 is provided.

A concise explanation of the relevance of each non-English language document or other information is as follows (37 C.F.R. §1.98(a)(3)):

WO 02/30880: WO 02/30880 discloses N-substituted amino acid derivative compounds of formula I, as described therein, which are suitable as inhibitors of blood coagulation factor Xa. For example, D-alanine was condensed with 3-iodobenzonitrile to give (2R)-2-(3-cyanophenylamino)-propionic acid, which was then reacted with 4'-aminobiphenyl-2-sulfonic acid tert-Bu amide to give (2R)-N-(2'-tert-butylsulfamoylbiphenyl-4-yl)-2-(3-

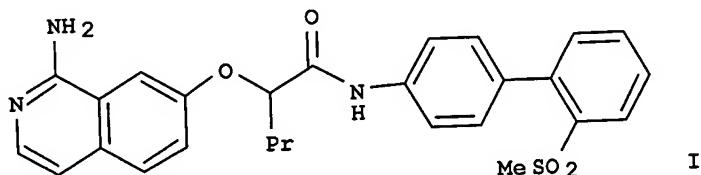
cyanophenylamino)-propionic acid amide (II). The cyano group of II was then reacted with hydroxylamine hydrochloride to give I.



WO 02/08177: Applicants note that a corresponding US application, US2003/0162814, has published in English (identified by Micropatent family search).

WO 02/48099: Applicants note that a corresponding US application, US2004/0038858, has published in English (identified by Micropatent family search).

WO 02/24654: WO 02/24654 discloses biphenyl-substituted aminoquinoline and isoquinoline derivative compounds of Formula I, as described therein, which are suitable as inhibitors of blood coagulation factors Xa and VIIa. For example, 7-isoquinolinol was treated with  $\text{BrCHPrCO}_2\text{CMe}_3$ , followed by ester hydrolysis, amidation with  $2\text{-MeSO}_2\text{C}_6\text{H}_4\text{C}_6\text{H}_4\text{NH}_2\text{-4, N-oxide}$ , reaction with pyridine, and treatment with ethanolamine to give the title compd. I.



No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§102 and 103 and Applicants reserve the right, pursuant to 37 C.F.R. §1.131 or otherwise, to establish that the reference(s) are not "prior art." Moreover, Applicants do not represent that a reference has been thoroughly reviewed or that any relevance of any portion of a reference is intended.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form

1449, marked as being considered and initialed by the Examiner, to the undersigned with the next official communication.

It is understood by the Applicants that this paper requires no fee; however, authorization is given to charge any necessary filing fees and any additional fees or credit any overpayment to Deposit Account 23-0455.

Authorization is hereby given to charge the required fee under 37 C.F.R. §1.17(p), any other necessary filing fees and any additional fees or credit any overpayment to Deposit Account 23-0455.

Respectfully Submitted,

Dated: 4-13-04

Cynthia M. Bott

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PTO/SB/08a (08-03)

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Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

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of

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### Complete if Known

Application Number	10/662,046
Filing Date	September 11, 2003
First Named Inventor	Bolton, et al
Art Unit	1626
Examiner Name	Not Yet Known

Attorney Docket Number PC 25006A

### U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US- 4559157	December 17, 1985	Smith, et al.	
		US- 4608392	August 26, 1996	Jacquet, et al.	
		US- 4820508	April 11, 1989	Mitchell S. Wortzman	
		US- 4938949	July 3, 1990	Borch, et al.	
		US- 4992478	February 12, 1991	Geria, et al.	
		US- 5807875	September 15, 1998	Rudolf, et al.	
		US- 2004/0038858	February 26, 2004	Dorsch, et al.	
		US- 2003/0162814	August 28, 2003	Juraszyk, et al.	
		US-			

### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
		WO 01/64642 A2	09/07/01	Cortherapeutics, Inc.		
		WO 01/96296 A1	12/20/01	Eli Lilly and Company		
		WO 02/057236 A1	07/25/02	Merck Patent GMBH		
		WO 02/08177 A2	01/31/02	Merck Patent GMBH		
		WO 02/24654 A1	03/28/02	Merck Patent GMBH		

Examiner Signature		Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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<p>Substitute for form 1449A/PTO</p> <p><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></p> <p><i>(Use as many sheets as necessary)</i></p>		<b>Complete if Known</b>	
		Application Number	10/662,046
		Filing Date	September 11, 2003
		First Named Inventor	Bolton, et al.
		Art Unit	1626
		Examiner Name	Not Yet Known
Sheet	2	of	5
		Attorney Docket Number	
		PC 25006	

**U. S. PATENT DOCUMENTS**

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
		WO 02/30880 A2 .	04/18/02	Merck Patent GMBH		
		WO 98/007718 A1 .	02/26/98	Warner-Lambert Company		
		WO 98/50029 A1 .	11/12/98	University of Pittsburgh		
		WO 97/05161 A1 .	02/13/97	Sandoz Ltd.		
		WO 97/19911 A1 .	06/05/97	Dr. Karl Thomae GMBH		

Examiner Signature		Date Considered
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## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

**(Use as many sheets as necessary)**

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of

### Complete If Known

Application Number	10/662,046
Filing Date	September 11, 2003
First Named Inventor	Bolton, et al
Art Unit	1626
Examiner Name	Not Yet Known
Attorney Docket Number	PC 25006A

## U. S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>8</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
		WO 97/46576 A1 ~	12/11/97	Gyogyszerkutato Intezet		
		WO 95/28420 A1 •	10/26/95	Corvas International Inc.		
		WO 02/48099 A1 •	06/20/02	Merck Patent GMBH		
		CA 23/99018 A...	08/30/01	Merck Patent GMBH		

Examiner Signature		Date Considered	
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/662,046
<i>(Use as many sheets as necessary)</i>				Filing Date	September 11, 2003
				First Named Inventor	Bolton, et al
				Art Unit	1626
				Examiner Name	Not Yet Known
Sheet	4	of	5	Attorney Docket Number	PC 25006A

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
		BERGE S.M. ET AL., Pharmaceutical Salts, Journal of Pharmaceutical Science, 1977;66:1- 19		
		EDMUNDs et al., Annual Reports in Medicinal Chemistry, 1996, p. 51		
		ERIK VERNER et al.: "Development of Serine Protease Inhibitors Displaying a Multicenter Short Hydrogen Bond Binding Mode: Inhibitors of Urokinase-Type Plasminogen Activator and Factor Xa" JOURNAL OF MEDICINAL CHEMISTRY Vol 44, no. 17, 2001, Pages 2753-2771, XP002216503		
		F AL-OBEIDI & JAOSTREM: "Factor Xa Inhibitors" EXPERT OPINION ON THERAPEUTIC PATENTS., Vol 9, No. 7, 1999, Pages 931-953, XP001000512		
		FIORAVANTI et al., Thromb. Res., 1993, pp. 317-324		
		FIORAVANTI et al., Thromb. Res., 1993, pp. 317-324		
		KUNITADA and NAGAHAREA, Cirr. Pharm. Des., 1996, pp 531-542		
		LAPATTO et al., Embo. J, 1997, pp. 5151-5161		
		LEADLEY, Curr. Top. Med. Chem., 2001, Vol. 1, pp. 151-159		
		LYNCH et al., Thromb. Haemostasis, 1995, pp 640-645		

Examiner Signature		Date Considered	
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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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<p>Sheet</p>		<p>5</p>	<p>of</p>	<p>5</p>	<p>Attorney Docket Number</p>
<p>Application Number</p>		<p>10/662,046</p>			
<p>Filing Date</p>		<p>September 11, 2003</p>			
<p>First Named Inventor</p>		<p>Bolton, et al.</p>			
<p>Art Unit</p>		<p>1626</p>			
<p>Examiner Name</p>		<p>Not Yet Known</p>			

## NON PATENT LITERATURE DOCUMENTS

Examiner Signature		Date Considered	
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